Newsletter 32 of EUROPT

EUROPT - The Continuous Optimization Working Group of EURO

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Words from the Chair

Dear Colleagues,

On behalf of the EUROPT Managing Board let me welcome you to the 32nd EUROPT Newsletter. Please find a report on the Joint ORSC/EURO International Conference 2015 on Continuous Optimization and announcement of future events.

The Joint ORSC/EURO International Conference 2015 on Continuous Optimization held May 10-12, 2015, in Shanghai, China, was organized by Operations Research Society of China (ORSC) and the Association of European Operational Research Societies (EURO). It was the first event of the Joint ORSC/EURO International Conference series. Math Programming Subsociety of ORSC and Continuous Optimization Working Group of EURO (EUROPT) were responsible for the scientific part of the conference supervised by an international Program Committee.

At this conference there were four plenary talks given by invited speakers Yaroslav Sergeyev (University of Calabria, Italy), Dongdong Ge (Shanghai University of Finance and Economics, China), Yaxiang Yuan (Chinese Academy of Sciences, China), and Vladimir Shikhman (Catholic University of Louvain (UCL), Belgium). There were also twelve invited sessions and eight contributed sessions. The list of around 200 participants includes 140 participants from China, 24 from European countries, and others from all around the world. There were also around 20 volunteers from Shanghai University helping the organizing committee.

Full papers are invited to be submitted by July 10, 2015 for the special issue of the Journal of the Operations Research Society of China published by Springer. The papers must be written in English and submitted through the editorial manager system of the journal.

Soon EUROPT Workshop on Advances in Continuous Optimization will be held 8-10 July, 2015, in Edinburgh. I hope to see many of you there and I wish a fruitful and successful event.

Julius Žilinskas, Chair, EUROPT Managing Board

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Report of the Joint ORSC/EURO 2015 International Conference on Continuous Optimization

http://orsc-euro2015.csp.escience.cn/

Science and Friendship between China and Europe in OR

The first Joint ORSC/EURO International Conference on Continuous Optimization was held at Shanghai University, Shanghai, China, last May 10-22, 2015. The conference was organized by The Operations Research Society of China (ORSC; http://www.orsc.org.cn) presented by its President, Prof. Dr. Xiaodong Hu, and the Association of European Operational Research Societies (EURO; https://www.euro-online.org/) represented by its Past President, Prof. Dr. Gerhard Wäscher.

The idea of the joint event between EURO and ORSC was proposed by Professor Gerhard Wäscher, then the President in Munich in September 2013. After several discussions with ORSC and EURO leaderships regarding the theme, conceptualization, organization and finalization of the event took place during the IFORS conference at Barcelona in July 2014. This was further reinforced by his visit to Beijing in November of the same year. With such detailed preparation, the realization of the first joint EURO/ORSC international conference then took place in Shanghai, which envisioned as a new platform, the promotion of academic communication and cooperation between Chinese and European researchers and practitioners in the field of continuous optimization, welcoming all academicians and researchers worldwide.

The program was highlighted by the Plenary Talks of four well-known academicians and research enthusiasts, all experts in the field of continuous optimization. It included the following lectures of: Prof. Dr. Yaroslav Sergeyev of the University of Calabria, Italy, on *Lipschitz Global Optimization*; Prof. Dr Dongdong Ge of Shanghai University of Finance and Economics, China, on *The Complexity and Algorithms of Regularized Least Square Problem*; Prof. Yaxiang Yuan of the Chinese Academy of Sciences, China, on *Recent Advances in Trust Region Algorithms* and lastly, Prof. Vladimir Shikhman of the Catholic University of Louvain, Belgium, on the *Algorithmic Models of Market Equilibrium*.

Of the medium-sized abstracts, received by the program committee, only 86 were accepted for presentation. Four parallel tracks featured the final papers covering different topics on continuous optimization like subspace global and control, stochastic, conic and tensor, non-linear and multi-objective optimization and their applications in the different fields such as finance, economics and science, mathematics, programming, advertising, budgeting, productivity, hospital capacity management, marine fishery industry, water quality management, marketing, data envelopment analysis, location routing, information system for operational state estimation in complex machines, health care management, robust simulation of stochastic systems, fingerprint recognition, petrochemical industry, optical tenement application for alleviating traffic jams, aeronautics, hybrid energy, procurement planning and other related fields.

The event was well-attended by almost 220 international participants broken down as follows: ca. 60 from outside of mainland China (European, some from the USA and other Asian countries), 140 from mainland China while others were conference volunteers. Everyone benefited from the very informative and interesting lectures and presentations. A welcome reception took place on the evening of the first day at the Chinese Restaurant of the Lehu Hotel. Everyone enjoyed the event that served as a haven for the participants to meet new acquaintances, all research enthusiasts, OR and optimization experts. The special social highlight of the conference was the boat tour on the river, where the participants enjoyed the dinner and the impressive downtown Shanghai at night, with famous Bund, Pudong's Skyline, etc. At all these occasions, old friendship was deepened and new friendship made. Certainly, this will become very valuable for scientific collaboration and serving our OR community of the future together.

Professors Yanquin Bai and Gerhard-Wilhelm Weber, co-chairs of the Organizing Committee and Professors Yuhong Dai (President of the Mathematical Programming Subsociety of ORSC) and Julius Zilinskas (Chair of EURO Working Group on Continuous Optimization, EUROPT), co-chairs of the Program Committee, expressed their deep gratitude to the participants and to the organizers for the success of the conference. A lot of positive feedbacks were gathered from the conference participants like the excellent hospitality of the local organizing and service team and the very conducive venue of the conference as manifested by the world-class facilities utilized in the entire duration of the conference was very much appreciated. With all these comments, it seemed that the participants were again interested to attend future conferences, namely, EURO 2015 and 2016, and EUROPT 2016, which will be held in Glasgow, UK, and Poznan, Poland, and in Warsaw, Poland, respectively.

A second Joint ORSC/EURO Conference is planned to be held two years later.

Joint ORSC / EURO International Conference 2015 on Continuous Optimization
May 10–12, 2015   Shanghai China

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Operational Research and Continuous Optimization: A challenge to researchers

Over the past decades, Operational Research (OR) and Continuous Optimization has been a trend of international research conferences and presentations. This type of research is very much beneficial, especially, to developing countries, since it fosters its use for development.

International conferences on OR for Development serve as an avenue for researchers to interact, share recent findings and advances, discuss future perspectives through collaborative efforts and learn from its applications. How? The experiences of developed countries are shared and increased networking with other countries is very timely. Initiatives are disseminated and support is on hand. Better social working relationships would further evolve between partner countries. This will lead to the economic alleviation of developing countries.

Why OR and Continuous Optimization? This is because of its utilization in the different scientific fields like finance, economics and science, computing, advertising, budgeting, productivity, hospital capacity management, marine fishery industry, water quality management, marketing, data envelopment analysis, location routing, information system for operational state estimation in complex machines, health care management, robust simulation of stochastic systems, fingerprint recognition, petrochemical industry, optical tenement application for alleviating traffic jams, aeronautics, hybrid energy, procurement planning and other related fields. As others say - name it and you'll have it. It works on almost all areas of development.

To future researches, it is best to focus on Operational Research and Continuous Optimization for future development - not only professionally but also economically.

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Forthcoming Events

45th Annual Conference of the Italian Operations Research Society AIRO 2015

Pisa, Italy, 7-10 September, 2015

http://www.airo.org/conferences/airo2015

AIRO 2015 Conference

The 45th Annual Conference of the Italian Operations Research Society, AIRO 2015, will be hosted at the Department of Computer Science of the University of Pisa on September 7-10, 2015.

The conference is organized into plenary and parallel sessions, with Italian and English as the official languages.

Plenary Speakers:

- Luis Eduardo Neves Gouveia (University of Lisbon, Portugal)

- Leo Liberti (CNRS LIX Ecole Polytechnique, Paris, France)

- Claudia Sagastizabal (Instituto Nacional de Matematica Pura e Aplicada, Rio de Janeiro, Brazil)

AIRO 2015 is the traditional yearly get-together of the Italian Operations Research Society, but colleagues from all around the world working on all facets of optimization are warmly welcome.

63rd Workshop on Variational Analysis and Applications
Erice, Italy, August 28 - September 5, 2015

The workshop aims at presenting state-of-the-art and current research directions in variational analysis and partial differential equations and systems.

Variational analysis encompasses a large area of modern mathematics, including the classic calculus of variations, the theories of perturbation, approximation, subgradient, subderivatives, set convergence and variational inequalities. Originating with the Signorini problem, about 5 decades ago, variational inequalities have undergone great development and influence both in the progress of variational analysis, and in applications to mathematical physics and, more recently, to engineering, statistics, economics, financial networks and generalized complementarity problems.

In particular, several classical and new theories have received a strong impulse for effective solutions to until-now unsolved problems. These theories include: infinite dimensional duality and zero duality gap, minimax problems, variational principles and fixed points problems, Jacobian and Hessian equations, degenerate problems, variational problems with measurable coefficients, inverse variational problems, second order optimality conditions, infima over sub-level sets, stochastic variational inequalities and optimization problems, variational and differential inclusions.

The workshop aims at offering a review of the results achieved in the above research themes, specifying the used methods and pointing out the open problems together with outlines of the new research trends in the principal topics of variational analysis and applications.

The sessions of September 3-4 will be dedicated to Professor Antonino Maugeri in the occasion of his 70th birthday.

The proceedings of the special session dedicated to Professor Maugeri, but extended also to all the participants in the international workshop, will be published in a special issue of *Journal of Convex Analysis*, edited by P. Daniele, F. Giannessi and M. Théra. The deadline for submitting the contribution is November 1, 2015.

During the opening ceremony of the International Workshop, a Gold Medal in honour of Guido Stampacchia will be assigned for the fifth time, after an international competition, to a young mathematician, whose age be not greater than 35 years at the date of December 31st 2015, for his scientific contribution in the field of Variational Analysis.

Editor's notes

Dear members of EUROPT, dear readers,

The Joint ORSC/EURO 2015 International Conference on Continuous Optimization which was held in Shanghai last May was the first joint event between EURO and ORSC, and successfully promoted academic cooperation between Chinese and European researchers and practitioners in the field of continuous optimization. In this issue of our Newsletter we present a report of this event, as well as a comment on *Operational Research and Continuous Optimization* by Milagros Baldemor.

We also advertise for participation to the forthcoming annual conference of the Italian Operations Research Society and to the 63rd Workshop on Variational Analysis and Applications, to be held in Erice.

Thanks to everybody who contributed to this issue.
Hoping to see most of you in coming events of interest to our community.

The Newsletter Editor

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